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ABSTRACT

This formative evaluation report documents the progress made by the Holliday Montessori Magnet Elementary School (Kansas City, Missouri) during the first year of implementation of Montessori themes. The evaluation was based on the goals established by the Holliday Montessori Site Plan and the Long-Range Magnet School Plan. Examined were enrollment data; program implementation; parent, teacher, administrator, and student attitudes toward the program; and student achievement. Enrollment data indicated that the school's enrollment was 9% below program capacity, and that the school was close to achieving the desegregation goal of 60% minority and 40% nonminority students and had maintained court-ordered class size limits. Achievement scores for nonminority kindergarten students were above national norms in math and language subtests, but minority student achievement scores fell below the national norm. Classroom observations, site visits, questionnaires, and interviews suggest that the program is being implemented according to the site plan and long-range plan objectives. However, program participants identified problems associated with inadequate supplies and materials, student transportation, communication among colleagues, vacancies for Montessori resources staff, and training for teachers and paraprofessionals. Perceptions of parents were positive and reflected a strong degree of satisfaction in most areas of program implementation. Recommendations based on the evaluation results are provided. Appended are 4 references and related materials. (GLR)

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Formative Evaluation of the Holliday Montessori Magnet Elementary School

1990-1991

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August 1991

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Formative Evaluation of the Holliday Montessori Magnet Elementary School

1990-1991

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August 1991

Evaluation Office
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Executive Summary

The Holliday Montessori Magnet Elementary School has completed its first year of operation as part of the Kansas City, Missouri, School District's (KCMSD) *Long-Range Magnet School Plan*. The school is currently located at Willard School while planning and construction of a new building is underway. The ground breaking for the new building is scheduled for the summer of 1991. This new complex will be located at 73rd and Jackson and will be adjacent to Knotts Environmental Science Magnet School. Completion is scheduled for August of 1992.

This formative evaluation report documents the progress made by the school during the first year of implementing the Montessori theme. The evaluation is based on the goals and objectives established by the *Holliday Montessori Site Plan* and the *Long-Range Magnet School Plan*.

Enrollment data for this evaluation indicated that Holliday was at program capacity for three year old enrollment; was 2% below program capacity for four year old enrollment; and 19% below capacity for kindergarten enrollment. Overall, Holliday's enrollment is 9% below program capacity; is close to achieving the desegregation goal of 60% minority/40% non-minority, and has maintained court-ordered class size limits. School enrollment stands at 61% minority/39% non-minority with 219 students enrolled in the three year old, four year old, and kindergarten classes.

Program implementation results during this first year are encouraging, however some problems have been identified by program participants. Problems associated with adequate supplies and materials, student transportation, communication among colleagues, three vacancies for Montessori resource staff, and training for teachers and paraprofessionals who work in the Montessori theme appear to be concerns of program participants.

Alternately, achievement scores for kindergarten non-minority students are well above national norms in math and language Iowa Tests of Basic Skills subtests. Minority student achievement scores are below the national norm. Classroom observations, site visits, and interviews suggest that the program is being implemented according to the site plan and Long-Range Plan objectives. Perceptions of parents are positive and reflect a strong degree of satisfaction in most areas of program implementation.

FORMATIVE EVALUATION OF THE

HOLLIDAY MONTESSORI MAGNET ELEMENTARY SCHOOL

1990-1991

Introduction

This formative evaluation documents the progress made by the Holliday Montessori Magnet School in its first year of implementing the Montessori magnet theme. Holliday began operations during the 1990-1991 academic year as an integral part of the district's magnet school plan. During this first year of implementation, Holliday was located at the site of the Willard School. This temporary site will continue to house Holliday until construction is completed on the permanent site.

Holliday operates in accordance with the *Long-Range Magnet School Plan* (Hale & Levine, 1986), hereinafter called the Long-Range Plan, and the *Holliday Montessori Site Plan* (Holliday Montessori Site Task Force, 1990) that was established by a magnet task force convened at the school. In keeping with the Long-Range Plan, the site plan was developed during the 1989-1990 planning year and established the structure, objectives and goals for the Montessori program. Task force membership included administrative leadership, teachers, and local community representatives.

The Long-Range Plan set forth guidelines and requirements for the evaluation of magnet school programs. Specifically, the Plan states "individual magnet schools should be evaluated based upon the unique needs of the specific site and that a school's effectiveness should <u>not</u> be determined during its first year of operation. Evaluation on an individual basis during its early years should be designed with the intent of improving, modifying, and revising program implementation" (Hale & Levine, 1986, pp. 46-47).

The primary focus of this evaluation was to assess progress toward meeting the site plan goals and objectives, and determine achievement of court-ordered enrollment and racial composition expectations. In order to accommodate this focus, information was collected from district administrators, school leadership, teachers, and students. Classroom and building observational data provide further evidence of program implementation progress. Enrollment and racial composition data have been gathered from the district's research office.

This report provides a brief description of the Montessori magnet program and the design of the evaluation study, as well as a detailed presentation of the evaluation results. Conclusions and recommendations based upon obtained results are offered with an eye toward improved program functioning.

Program Description

Following the teachings and method established by Dr. Maria Montessori and the standards set by the Association Montessori Internationale, Holliday is currently one of two public Montessori schools in the Kansas City, Missouri, School District. The district established the first public Montessori school in the fall of 1988. The Montessori program at Holliday reflects the philosophy of education advanced by Dr. Montessori: "The goal of early childhood education should not be to fill the child with facts from a pre-selected course of studies, but rather to cultivate his own natural desire to learn" (Denver Public Schools, 1988). According to the Montessori method, this is accomplished in two ways: first, by allowing each child to experience the excitement of learning by his own choice rather than by being forced and secondly, by helping him to perfect all his natural tools for learning, so that his ability will be at a maximum in future learning settings.

The Holliday program facilitates independent, continuous-progress learning. It is a goal of this program to provide an enriched learning environment which challenges students to develop higher-order thinking skills through self-motivated learning. Additionally, Holliday provides mixed-age classroom environments based on the Montessori theory of child development. Specifically designed Montessori materials are utilized to implement the curriculum and facilitate independent learning. A unique focus of the learning environment at Holliday is the provision, as specified in the site plan, for exposure to and respect for our physical and social environment. Given the specialized instructional environment of the Montessori program, all teachers are expected to have special Montessori training and certification. While none of the current teachers at Holliday have completed this training, each is approximately half finished with the Montessori certification process.

The Holliday Site Plan proposes to make provisions for parental and community involvement in the school's program. Parents are viewed as the first educator in the child's formal educational experience and as such are provided with information to assist them in the application of the Montessori theory of child development.

Currently, there are twelve Montessori classrooms at Holliday, each containing three year olds, four year olds, and kindergartners. According to the Holliday Site Plan, an additional grade level will be added to the existing structure until the magnet program serves pre-kindergarten through fifth grade. In the upcoming year, first grade will be added. It is planned to have grade five integrated for the 1995-1996 school year. Tentative plans are to group two consecutive grade levels of students in classrooms (e.g., grades four and five).

Evaluation Design

The information provided in this evaluation report examines program implementation progress, enrollment and racial composition, class size, perceptions of program participants, and achievement results for the first year of implementation.

Evaluation Questions

Guiding this evaluation of the Holliday Montessori Magnet School was the Long-Range Plan and the Holliday Site Plan. This formative evaluation was designed to address the following questions:

1. Has the school met the established enrollment goals?
2. Was the program implemented as detailed in the *Long-Range Magnet School Plan* and in the site plan of the school?
3. What are parent, teacher, student, and school leadership perceptions and attitudes toward the program?
4. What are the levels of student achievement in the school?

Evaluation Method

Data collection for the current year consisted of gathering enrollment and racial composition data from reports prepared by the district's research office, collecting class size data, perceptual data, and observational data from school personnel. Enrollment and racial composition data was reported for the first year of implementation. Program implementation was examined utilizing classroom observations, on-site visitations, interviews with school leadership, administrations of teacher, student and parent questionnaires, and Iowa Tests of Basic Skills (ITBS) achievement results. Student and parent responses to questionnaire items were gathered in the spring and are reported in this formative evaluation report.

Data to address the above-mentioned evaluation questions have been collected in the following manner:

Demographic data. Enrollment and racial composition data have been extracted from the official student membership reports prepared by the research office of the school district. This data was based on enrollment figures reported on the fourth Wednesday in September. Minority and non-minority figures were presented by grade. Additionally, compliance data with court-ordered class size limits was gathered through the research office and updated with reports from school personnel last fall. Extended day enrollment figures were reported. These figures were gathered from school personnel in December and were verified with school leadership.

Implementation. The functioning of particular aspects of the Montessori program is evaluated as delineated in the Long-Range Plan and the Holliday Site Plan. Data regarding implementation has been gathered through classroom observations, on-site visitations, review of program records, questionnaires, and interviews with school personnel.

Classroom and building observations. During the period spanning October to April, 20-minute observations were conducted, with each minute being a separate observation interval. Data regarding the occurrence of the following were gathered: grouping of students, involvement of students in independent interaction with materials, teacher supervision of activities, student involvement in activities that enhance motor skill coordination, and student task involvement. Classrooms were observed on a weekly basis, with three randomly selected classrooms being observed on each visit. Additionally, visits were made to each classroom and throughout the building to document evidence of exposure to the environment and issues surrounding a healthy and peaceful relationship with nature.

Interviews. School leadership was interviewed twice during the academic year. Interviews were designed to document various additional aspects of the program and follow-up on emerging issues or concerns suggested by program participants. Additionally, school leadership was asked to express perceptions and attitudes toward the program and the progress achieved thus far.

Perceptions. Parents, students, and teachers were contacted during the academic year to gather their perceptions of program functioning and to gain insight into emerging issues of importance to program participants.

Teacher questionnaires were administered on-site by evaluation personnel during regularly scheduled faculty meetings. Perceptions were gathered twice during the year (early fall, late spring). Questionnaires were group administered and provisions were made to assure

anonymity. Student perceptions were gathered once (late spring) with intact classrooms being selected to respond to a developmentally appropriate questionnaire. One-third of the classes were sampled randomly.

Parent perceptions were gathered once (mid-spring). Parents of one-quarter of the students were randomly selected and contacted for a telephone interview. Parents were asked to respond to a series of questions probing their perceptions of the program, the school, and their child's educational progress.

Achievement. Student achievement indices are reported for the Iowa Tests of Basic Skills (ITBS). ITBS percentile ranks of mean grade equivalent scores of students at Holliday are reported by grade level and minority group membership. These figures were obtained from testing office computer files and aggregated by minority groupings.

Results

Enrollment Goals

According to figures released in the *September 26, 1990, Student Membership* report prepared by the district's research office and the 1990-1991 program capacity information utilized by the district's Admissions Office, actual student enrollment at Holliday is 9% below program capacity (see Table 1). Furthermore, kindergarten enrollment fell short of the program capacity by 24%. Pre-kindergarten grade level enrollments were at or slightly below program capacities. Actual student enrollment was 219 students while program capacity was set at 240 students.

The achievement of court-ordered desegregation in the KCMSD is a central feature of the magnet school plan and the Holliday Site Plan. According to the Long-Range Plan, "The purpose of magnet schools for KCMSD is to increase desegregation in as many of its classrooms as possible" (Hale & Levine, 1986, p. 3). At Holliday, each incoming grade is expected to reflect a 60% minority/40% non-minority racial composition. Grades already established are expected to maintain the 60-40 balance. An examination of Table 1 indicates that only in the four year old class is the racial balance achieved. The three year old class and kindergarten class have approximated the racial composition with 63% and 62% respectively, minority enrollment.

Class size. The Long-Range Plan limits the size of Montessori classes to no greater than 20 students. As of September, figures provided by the district's research office indicated

Table 1
Holliday Montessori
Enrollment and Program Capacity
1990-91

Grade	Minority N	Minority % of Total	Non-Minority N	Non-Minority % of Total	Program[1] Capacity	Actual[2]	Difference	Percent of Capacity
3 Year Olds	50	63%	30	38%	80	80	0	100%
4 Year Olds	46	59%	32	41%	80	78	-2	98%
Kindergarten	38	62%	23	38%	80	61	-19	76%
Total	134	61%	85	39%	240	219	-21	91%

Note: Percentages are rounded to the nearest whole percent.

[1] Program Capacity utilized by the Admissions Office when placing students in magnet programs.

[2] Sum of N for grade level. From *September 26, 1990, Student Membership.*

[3] "-" Indicates number of students enrolled below capacity.

that Holliday class sizes averaged 17.91 students per class with no class reporting enrollment greater than 19 students.

Implementation

The Holliday Montessori Magnet School has demonstrated progress in its first year of implementation of the magnet theme. The results are encouraging given the host of hindrances encountered by school leadership and staff.

Transportation. According to school leadership, student transportation was problematic at school start-up and sporadic during the current year. School leadership indicated that transportation was inadequate and displayed a lack of planning by the transportation company and the district transportation office.

Supplies and materials. The acquisition of supplies and materials has been problematic. According to school leadership, materials ordered at the beginning of the year did not arrive until late November. School leadership indicated in a late spring interview that the lack of materials and supplies in the fall was the single most important problem teachers faced in their efforts to implement the program. Further, school leadership reported in the fall term that materials orders "were not processed in a timely manner or not at all". Teachers, at the end of the current school year, indicated that many items ordered for this school year were not received or available. Responses to a teacher questionnaire item in the spring indicated that

no teachers agreed with the statement "I have been able to get all the materials I need to implement the magnet school theme".

Staffing. As of the end of the current implementation year, three of the four resource positions were unfilled. In addition each of the 12 classroom teachers were not certified to teach in the Montessori setting. However, these individuals have been enrolled in a Montessori teacher training program and have completed one-half of the requirements for certification. Overall, school leadership reports that the Montessori staff has made excellent progress in their efforts to implement the magnet theme, although teachers as well as students have had to adjust to the new educational environment. In particular, leadership has indicated that during this first year of implementation, the school was staffed with teachers from a non-Montessori background. Teachers, in order to be Montessori certified, have participated in 75 hours of Montessori observation and 100 hours of student teaching. This has required time off-site for these teachers and thus problems with scheduling substitute teachers.

Holliday will add first grade to their compliment of grade levels served in the upcoming year. This will necessitate the employment of three Montessori teachers and three paraprofessionals, two additional resource teachers (one for pre-kindergarten and one for elementary grades), and the addition of one paraprofessional for the library. As of May, school leadership indicated that three first grade, fully Montessori trained, teachers had been recommended for employment. Further, two qualified resource teachers have been recommended. If these individuals are offered employment, leadership expects one vacant resource position in the upcoming year. Additionally, the district is engaged in a budget reduction effort to reduce administrative costs. Targeted for potential elimination are the instructional assistant positions. It is expected that the responsibilities of this position would be integrated into the administrative structure of the school.

In summarizing the staffing situation, Holliday expects to have fully trained teachers by the end of the upcoming year in pre-kindergarten and first grade classrooms. All but one resource position will be staffed, and there will be a full compliment of paraprofessionals.

Staff Development and in-service. Teachers were asked a series of questions regarding building and district in-service/staff development. When teachers were asked if they were satisfied with in-service sessions regarding the magnet school plan, 60% indicated satisfaction (see Table 3, items 5-7). When teachers were asked if the school-based Montessori in-service

was beneficial, 43% responded positively. Alternately, when asked about theme in-service provided during the year, 60% were satisfied with the staff development activities.

Holliday teachers, as noted previously, have engaged in a substantial number of in-service, training, and preparation hours beyond the regular annual in-service schedule. Holliday teachers also participated in 80 hours of regular staff development workshops with Montessori professionals. Additionally, two teachers were sent to a reading skills workshop in Dallas, Texas. These teachers then shared their knowledge and experiences with the entire staff. Lastly, training sessions were conducted for all non-certified teachers to prepare for Montessori certification exams.

Parent and community involvement. The Holliday Site Plan speaks to the importance of parental and community involvement as integral components of the child's education. This involvement has been facilitated with the establishment, during this first year of implementation, of a School Advisory Committee (SAC). The SAC is composed of parents, community members, and school representatives. SAC meetings have been focused upon the timely and relevant dissemination of information to parents and community representatives concerning early-age children and Montessori educational issues. Fulfilling a similar dissemination function are monthly newsletters to all interested parties. According to school leadership, the typical participation at SAC meetings has averaged approximately 50 individuals.

Classroom observations. A central feature of the Holliday Montessori program is the provision for support of independent learning and the development of self-motivation. Teachers may address this goal by providing students with opportunities to engage in self-directed learning activities which demand minimal teacher leadership. In an effort to measure the extent of independent learning activities, classroom observations were conducted. Four categories of observational data are reported: student/teacher activity (student and teacher activities); working groups (the grouping of students for learning activities); teacher/student consultation (how teacher and students interact during learning activities); and student motor activities (whether students are engaged in activities that enhance motor and hand-eye coordination). The reader is referred to Table 2 which displays the results of classroom observations.

Student-teacher activity. Initially, the reader is referred to the independent interaction data (see Table 2). Students were involved in independent interaction with learning materials during 88% of the observation intervals. Independent interaction with learning materials

characterizes the unique nature of the Montessori classroom experience. The typical classroom environment, when independent interaction is present, is one in which students are seen to be operating on individual activities. Learning is occurring through manipulation of objects,

Table 2
Holliday Montessori
Classroom Observations
1990-1991

Observational Categories Activities	Percentage
Student/Teacher Activity	
Independent Interaction with Materials	88%
Other Academic	10%
Management	1%
Management While Students Working on Academics	0%
Interuption	0%
Other	0%
Total	99%
Working Groups	
Total Group	16%
Small Group	3%
Small Groups & Individual	32%
Individual-Same Activities	0%
Individual-Different Activities	49%
Other	0%
Total	100%
Teacher/Student Consultation	
Teacher Initiated Consultation	32%
Student Initiated Consultation with Teacher	8%
Teacher Silently Circulating	6%
Teacher Initiated Management	11%
Teacher Directing Small Group	27%
Teacher Directing Total Group	16%
Teacher Suggests Enrichment Activities	< 1%
Other	< 1%
Total	100%
Student Motor Coordination	
Occurring	84%
Not Occurring	16%
Total	100%

Note: Percentages are rounded to the nearest whole percent.
Based upon 680 observation intervals.

and visual inspection. While these two senses are dominant sources of information for the student, the Montessori experience is sensory based with teachers providing students the opportunity to explore and understand through the students own curiosity and sensory input. When working group data are examined, individuals working independently on different activities was the predominant structure for learning. In addition to small groups and individuals working independent of the small group (32%), total group instruction was found during 16% of the observation intervals, and was relatively low given the level of Montessori experience of the teaching staff. As can be deduced from the student/teacher activity data and the grouping data, teacher involvement in formalized instructional presentations, management activities, and total group work is generally low. This is consistent with the goals and philosophy of the Montessori method in which learning should be independent and self-motivated.

Teacher-student consultation. In support of the above observation, student initiated consultations were relatively low (see Table 2). During 32% of the observation intervals, teachers were involved in carrying out consultation they had initiated with students. Students only initiated consultation with teachers 8% of the time. Teachers silently circulated around the classroom in 6% of the observation intervals and directed small groups in 27% of the observations. Only 16% of the observation intervals had evidence of teachers directing total group work. These findings support the belief that teachers do not need to be directing the efforts of students for students to pursue learning activities. While one would expect to see a high incidence of consultation between teacher and student, the low incidence of total group instruction was an unanticipated positive finding, given the relative inexperience of the teaching staff in a Montessori learning environment.

Student motor coordination. When classrooms were observed for evidence of activities designed to enhance student motor coordination and contribute to eye-hand coordination, 84% of the observation intervals found students engaged in activities which enhance coordination (see Table 2).

Promotion of relationship between man and nature. As a component of this evaluation, observers documented physical (observable) evidence of the Site Plan goal to provide an environment which promotes the peaceful co-existence of man and nature.

One visit was made to Holliday searching for plants, animals, recycling and conservation efforts, displays, bulletin boards, and student projects which suggested that the theme was

being explored by teachers and students. A total of 17 sites within the building were examined for evidence. Of these sites, 76% (13) displayed evidence. One hundred percent of the classrooms had some evidence of this theme. Eighty-three percent of all sites examined had plantlife. Thirty-three percent of the classrooms had evidence of recycling and conservation efforts; 58% had theme-related displays made by the teacher; 92% had bulletin boards with theme-related information for students; and 42% had student projects demonstrating the relationship between man and nature.

Perceptions

Teacher perceptions. This section presents the perceptions and attitudes of teachers gathered at regularly scheduled faculty meetings in the fall and spring. Questionnaires were group administered by an evaluation staff member to Holliday teachers (Fall: N= 28, teachers and paraprofessionals; Spring, N= 10, teachers only). Teachers were encouraged to respond anonymously to items on the questionnaire. Responses were obtained from 10 of the 12 teaching staff members. The reader is referred to Table 3 for a listing of the questionnaire items and their respective response percentages. While considering the results, the reader is reminded that with such a small number of respondents (N= 10), response percentages tend to be exaggerated when reported as summary statistics. As such, percentages can be misleading (e.g., one individual represents ten percent of the respondents).

In general, teachers appear to have a mixed perception of the Montessori program. Holliday teachers report that they understand the goals of the Montessori theme (80%, item 1); believe the school is implementing the program according to stated goals and objectives (78%, item 2); and believe that their students will make good academic progress in the Montessori program (89%, item 14). Although teachers believe the program is being implemented as outlined in the site plan, a majority of teachers indicated that the program has several problems hindering effective implementation. As noted earlier, teachers expressed dissatisfaction with supplies and materials, staff development, and lack of resource teachers. Other areas of program functioning where examined as well.

Administrative and resource support. Teachers were not particularly satisfied with resource support and instructional leadership. When asked if satisfied with the quality of instructional leadership and assistance provided, 56% of the responding teachers were satisfied (see item 10). Similarly, 56% of the responding teachers were satisfied with the level of administrative support received in their efforts to successfully implement the theme. Lastly,

Table 3
Holliday Montessori
Response to Teacher Questionnaire
1990-1991

Statement	Response Alternatives	N	%
1. I understand the goals and objectives of the Montessori magnet theme.	Agree	8	80%
	Disagree	2	20%
2. I believe school is implementing the Montessori program according to the identified goals and objectives.	Agree	7	78%
	Disagree	2	22%
3. The opening of school went smoothly.[1]	Agree	8	32%
	Disagree	17	68%
4. I attended the in-service held prior to the opening of school.[1]	Agree	20	91%
	Disagree	2	9%
5. The Montessori in-service was beneficial.[1]	Agree	9	43%
	Disagree	12	57%
6. I am satisfied with the staff development/in-service regarding the magnet school plan.	Agree	6	60%
	Disagree	4	40%
7. I am satisfied with staff development/in-service sessions regarding this magnet school theme.	Agree	6	60%
	Disagree	4	40%
8. I am certified to teach Montessori.	Agree	2	22%
	Disagree	7	78%
9. I have been able to get all the materials I need to implement the magnet school theme.	Agree	0	0%
	Disagree	8	100%
10. I am satisfied with the quality of instructional leadership and assistance provided.	Agree	5	56%
	Disagree	4	44%
11. The facility is adequate and meets my instructional needs.	Agree	2	22%
	Disagree	7	78%
12. I have been able to infuse the magnet curriculum into the basic curricula of the district.	Agree	4	57%
	Disagree	3	43%
13. I believe I have the necessary building level administrative support to successfully implement this program.	Agree	5	56%
	Disagree	4	44%
14. I believe the students are making good academic progress because of the Montessori magnet theme.	Agree	8	89%
	Disagree	1	11%
15. The magnet theme resource support staff have provided the support I need to successfully implement the magnet theme at this school (i.e., counselors, resource teacher).	Agree	3	33%
	Disagree	6	67%
16. I am satisfied with the degree of communication among teachers.	Agree	6	60%
	Disagree	4	40%
17. I am satisfied with the degree of communication between myself and administration.	Agree	5	56%
	Disagree	4	44%

Table 3 (continued)
Holliday Montessori
Response to Teacher Questionnaire
1990-1991

Statement	Response Alternatives	N	%
18. Overall, what rating would you give this magnet school program this year?	Excellent	3	30%
	Good	3	30%
	Average	2	20%
	Fair	1	10%
	Poor	1	10%

[1] Item asked on fall questionnaire.

only 33% of the teachers felt they had received the needed support from resource teachers. School leadership indicated in a late spring interview that the teachers' dissatisfaction was a reflection of the three vacant resource staff positions. Leadership believes this will improve when the resource positions are staffed in the fall of the upcoming year.

Communication. Teacher responses to questions regarding the degree of communication (helpfulness, timeliness, and frequency) among teachers and between teachers and school leadership indicate potential areas on concern. While 56% of the respondents feel communication was satisfactory for their interaction with school leadership, 40% do not agree and 10% have no opinion. This finding may not be particularly eye-opening, but given a staff of 12 teachers, this is a sizeable number. Satisfaction with communication among teachers seems to be somewhat ambivalent as well (see item 16, 60%). While six out of ten teachers feel that the quality of communication among their colleagues is just fine, this finding seems to provide support for the notion that some teachers feel isolated from each other. This situation has been documented in numerous research studies of teacher interaction. Lastly, teachers were asked to rate the overall implementation of the magnet theme during the current year. As can be seen in Table 3 (item 18), 60% of the teachers rate the program as good or excellent, with only 2 teachers rating the program as fair or poor.

Parent perceptions. Parents were surveyed to determine their perceptions of the Montessori program during the first year of implementation. Telephone surveys were conducted by evaluation staff members during the early months of the spring term using a random sampling procedure by student grade level. Approximately 30% of the parents of Holliday students were selected to respond to the survey.

In general, parent perceptions are very favorable regarding the Montessori program (see Table 4). In fact, in areas where parent ratings could indicate dissatisfaction, only four areas were rated below 90% of agreement (magnet placement, items 1-2; transportation, item 3; understanding the magnet theme, item 7; and extended day, items 17-19). While these areas had lower ratings of satisfaction, the percentages still indicate a substantial amount of parent satisfaction. Parents overwhelmingly report feeling satisfied with the educational progress of their child (item 6, 91%) and in particular the child's progress in basic skills (item 9, 91%). Furthermore, parents appear quite satisfied with their child's progress in all other program areas: exposure to environmental issues (item 20, 100%); development of self-motivation (item 21, 91%); and development of motor skills (item 23, 91%). Parents are equally satisfied with their child's teachers (item 8, 94%) and feel the principal is responsive to their concerns (item 10, 98%). Overall, 98% of the parents are satisfied with the Montessori program as a whole (item 15).

Additional questions were asked of parents regarding the quality of specific program aspects (see Table 5). When parents were asked to rate the performance of the teachers, 91% gave them a rating of excellent or above average. School leadership received a rating of excellent or above average by 87% of the parents. In all, each aspect examined in Table 5 received a rating of above average or excellent by more than 80% of the parents. These findings overwhelmingly support the conclusion that Holliday parents are pleased with the Montessori program, its teachers and staff, and its results.

In an effort to determine why parents chose Holliday Montessori for their child's education, parents were further questioned for their reasons. As Table 6 indicates, Holliday parents are a well-informed group of consumers. Ninety-three percent of the parents were familiar with the Montessori approach to education and wanted their child in this environment. Parents were queried regarding their source of information about the Montessori program (see Table 7). Fifty-six percent of the parents found out about Holliday by word-of-mouth and greater than one-quarter of the parents relied upon school newsletters and brochures. Interestingly, the media was not mentioned prominently as a common source of information used by parents.

Student perceptions. Pre-kindergarten and kindergarten students were sampled at the classroom level through a random sampling procedure. Slightly less than 50% of the total student population were asked for their perceptions of particular aspects of their experience

Table 4

Holliday Montessori

Response to Parent Questionnaire

1990-1991

Statement	Response Alternatives	N	%
1. Way students were chosen for magnet schools for the 1990-1991 school year was fair.[1]	Agree	15	68%
	Disagree	7	32%
2. My child's application to Holliday Montessori for the 1990-1991 school year was handled in a reasonable amount of time.	Agree	36	71%
	Disagree	15	29%
3. The school bus or taxi takes my child to school and back in a reasonable amount of time.[2]	Agree	25	64%
	Disagree	14	36%
4. The school bus or taxi provides safe transportation for my child.[2]	Agree	37	95%
	Disagree	2	5%
5. The newsletters, notes, messages, or phone calls from my child's school have been understandable and helpful to me.	Agree	51	94%
	Disagree	3	6%
6. I am satisfied with the progress my child has made at Holliday Montessori.	Agree	49	91%
	Disagree	5	9%
7. I understand the Holliday Montessori magnet theme.	Agree	47	87%
	Disagree	7	13%
8. Overall, I am satisfied with my child's teachers.	Agree	51	94%
	Disagree	3	6%
9. I am satisfied with the progress my child has made in the basic skills, such as reading, writing, and arithmetic.	Agree	49	91%
	Disagree	5	9%
10. Overall, the principal of the Holliday Montessori is responsive to my concerns.	Agree	53	98%
	Disagree	1	2%
11. My participation as a parent (or guardian) is welcomed at Holliday Montessori .	Agree	54	100%
	Disagree	0	0%
12. My child's school is kept clean and in good repair.	Agree	53	98%
	Disagree	1	2%
13. I would recommend Holliday Montessori to other parents.	Agree	53	98%
	Disagree	1	2%
14. I believe that Holliday Montessori offers a quality education for all students.	Agree	54	100%
	Disagree	0	0%

Table 4 (continued)
Holliday Montessori
Response to Parent Questionnaire
1990-1991

Statement	Response Alternatives	N	%
15. Overall, I am satisfied with Holliday Montessori.	Agree	53	98%
	Disagree	1	2%
16. My child attends the extended day program.	Agree	25	50%
	Disagree	25	50%
17. I believe the extended day program, which runs before and after school, gives proper supervision to students.[3]	Agree	19	83%
	Disagree	4	17%
18. I believe the extended day program gives enough emphasis to academic activities.[3]	Agree	19	83%
	Disagree	4	17%
19. The extended day program was one of the reasons you enrolled your child in Holliday Montessori.	Agree	16	70%
	Disagree	7	30%
20. I am satisfied with the degree of exposure given to the environment my child is receiving.	Agree	41	100%
	Disagree	0	0%
21. I am satisfied with the progress my child has made in the development of self-motivation.	Agree	49	91%
	Disagree	5	9%
22. I am satisfied with my child's opportunities for self-directed learning.	Agree	46	85%
	Disagree	8	15%
23. I am satisifed with my child's progress in the development of motor skills.	Agree	49	91%
	Disagree	5	9%

Note: Percentages are rounded to the nearest whole percent. Because of rounding, percentages may not total to 100% for every question.

1 Only those parents who knew how children were selected are represented.

2 Only those parents whose children utilize district transportation are represented.

3 Only those parents whose children attended extended day activities are represented.

through a verbally administered 10-item questionnaire. The reader should be reminded to avoid making judgements regarding program effectiveness based upon young children's comments. With this in mind, the reader may notice several inconsistencies in the perceptions of students. Table 8 displays the responses of students and the questions students were asked. Overall, students report enjoying the Montessori program at Holliday (item 1, 91%) and believe they have learned a lot during this school year (item 2, 92%). Alternately, students

Table 5

Additional Parent Perceptions

Holliday Montessori

1990-1991

Items	Excellent	Above Average	Average	Below Average	Poor	No Opinion
"How would you rate the performance of the . . ."						
Overall Montessori Program	43%	41%	13%	4%	0%	0%
Teachers	48%	43%	7%	0%	0%	2%
School Leadership	59%	28%	4%	0%	0%	9%
Opportunity for Parental Involvement	78%	17%	6%	0%	0%	0%
School Communication with Parents	52%	37%	11%	0%	0%	0%

Note: Percentages are rounded to the nearest whole percent.

Table 6

Reasons Why Parents Chose to Enroll Their Child in Holliday Montessori, 1990-1991

Reasons	N	%
Parents liked theme	48	89%
Other children attend school	6	11%
Child Assigned	0	0%
Familiar with Montessori and wanted child in this environment	50	93%
Other reasons	11	21%

Note: From questionnaire administered in spring.

report less enjoyment for using cursive writing (item 5, 85%), using the reading book (item 6, 85%), having older and younger children in the same class (item 4, 77%), and working independently (item 8, 70%). A notable inconsistency can be found for items 1 and 10. Although 91% (item 1) of the students like going to Holliday, only 67% want to come back next year (item 10).

Extended Day Participation

Holliday offers morning and afternoon extended day sessions as specified in the Long-Range Plan. Extended day sessions at Holliday build upon the learning activities and skills found in daily instruction (see Appendix A). Holliday's extended day program had 103

Table 7

Ways Parents Learned About Holliday Montessori

1990-1991

Item	N	%
Friends, Co-workers, Etc.	30	56%
Newspaper Advertisements/Articles	6	11%
Parent/Teacher Organizations	5	9%
Radio	1	2%
School Brochures/Newsletters	15	28%
School Employees	12	22%
Students	4	7%
Television	6	11%
Other	1	2%

Note: Percentages are rounded to the nearest whole percent. From questionnaire administered in spring

participating students as of December, 1990 (see Table 9). According to enrollment figures the extended day program had a larger number of students who attended both sessions as compared to a single session. The racial composition of the sessions indicated that approximately 60% of the participants were minority students. The racial composition of extended day and school enrollment is quite similar.

A questionnaire administered in the spring asked parents of students who attended extended day sessions several questions regarding their perception of the extended day sessions (see Table 4, items 16-19). Parent responses indicate that 83% (87% minority/75% non-minority) are satisfied that the extended day sessions gave proper supervision to their child. Most parents felt the sessions gave adequate attention to academic activities (83%). However, when examined by minority groups it was found that minority student parents were much more satisfied than were non-minority student parents (93% versus 63%).

Extended day programs, believed to be a strong incentive to draw non-minority parents to enroll children in the district elementary schools, were found at Holliday to be under-utilized by non-minority students. When parents were asked if extended day was one of the reasons parents enrolled their children at Holliday, 70% answered in the affirmative. However, when examined by minority status of the student, minority student parents were more often found to have enrolled their child because of the extended day program (73% minority/63% non-minority).

Table 8
Holliday Montessori
Response to Student Questionnaire
1990-1991

Statement	Response Alternatives	N	%
1. Do you like going to Holliday Montessori?	Yes	95	91%
	No	10	10%
2. Do you think you have learned a lot in school this year?	Yes	97	92%
	No	8	8%
3. Would your friends like this school?	Yes	85	82%
	No	19	18%
4. Do you like having older and younger children in your class?	Yes	81	77%
	No	24	23%
5. Do you like to write with cursive letters?	Yes	89	85%
	No	16	15%
6. Do you like your reading book?	Yes	88	85%
	No	16	15%
7. Do you like to choose your own activities?	Yes	102	97%
	No	3	3%
8. Do you like to work all by yourself?	Yes	73	70%
	No	32	31%
9. Do you like to work in small groups?	Yes	91	87%
	No	14	13%
10. Would you like to go to this school next year?	Yes	70	67%
	No	35	33%

Note: Percentages are rounded to the nearest whole percent.

Achievement Data

ITBS achievement data for students enrolled in kindergarten are presented in Table 10. The scores reported are percentile ranks and represent the percentile rank of the mean grade equivalent score for the group in the particular content area and grade tested. Scores are further aggregated by ethnic group membership. Reading comprehension was not tested at the kindergarten grade level in 1990-1991. The 50th percentile is considered the national norm for percentile ranks. As shown in Table 10, the percentile ranks for kindergarten students

Table 9
Holliday Montessori
Extended Day Participation
1990-1991

Time	Minority N	Minority %	Non-Minority N	Non-Minority %	Total N	Total %
Before School Only	16	59%	11	41%	27	26%
After School Only	14	61%	9	39%	23	22%
Both	33	62%	20	38%	53	51%
Total	63	61%	40	39%	103	99%

Note: Percentages are rounded to the nearest whole percent. Data collected as of December 7, 1990.

Table 10
Holliday Montessori
Iowa Tests of Basic Skills Percentile Ranks
1990-1991

Grade Groups	Language	Math	Nat'l
Kindergarten	50	46	50
District	61	65	
Minority	35	36	
Non-Minority	69	62	

Note: Percentile ranks are converted from mean grade equivalent scores.

for language is at the national norm. Math achievement was slightly below the national norm. When compared to district-wide norms, Holliday students were below norm. Similarly, Holliday minority students scored lower than both district and national norms. Alternately, Holliday non-minority students had scores exceeding the national norm in both language and math. Non-minority students were slightly below the district norm in math.

Summary and Recommendations

The Holliday Montessori Magnet program has recently completed its first year implementing the magnet theme. This formative evaluation has documented enrollment and racial composition figures and the progress of implementation efforts.

The evaluation effort indicates that implementation is being addressed as planned in the Holliday Site Plan and the Long-Range Plan. School leadership summarizes the program implementation succinctly, "It's gone extremely well. Teachers have worked very hard and completed one-half of their course work; seventy-five hours of observation, and 100 hours of student teaching. Classrooms are complete as far as having Montessori materials. The children are engaged in a variety of learning activities, both in small groups and in individual instruction. The kindergarten students are ready for first grade." While some problems still exist, school leadership is aware of these hindrances and is beginning the process of addressing program deficiencies.

While summative judgments are not appropriate at this stage in the evaluation process, Holliday school leadership, staff, parents, and students appear to have a favorable perception of the program. Implementation is occurring as planned and specific behaviors of interest have been found to be in evidence. Of particular importance is the progress of the teaching staff in completing their Montessori training. The racial composition expectancies for 1990-1991 have been approximated and actual enrollments closely reflect projected enrollments. Class size data indicate that all classrooms at Holliday comply with specified class size limits.

When implementation progress was examined, the results suggested that problems of transportation have not been resolved. Leadership has noted a concern with the acquisition process and degree of responsiveness by the purchasing office and, in contrast with leadership perceptions, all teachers reported that they did not have the needed supplies to implement the magnet theme. Other perceptions indicate some dissatisfaction with school-based in-service regarding the Montessori theme. Teachers and school leadership have expressed concern regarding the lack of resource staff support, which can be attributed to three vacant elementary resource teacher positions. Teachers report some dissatisfaction with the quality of communication among staff members and between staff and leadership. Teachers rated the overall program high and, with a few exceptions, appear satisfied with the implementation effort thus far. Parents are overwhelmingly satisfied with most aspects of the Montessori program.

Evaluation results of classroom observations and on-site visitations suggest that teachers are providing an instructional environment consistent with the goals and objectives stated in the Holliday Site Plan. Independent learning and cooperative learning opportunities are quite evident in classroom observation results. Teacher/student consultations reflect the philosophy of learning through non-directed exploration. Opportunities for motor and hand-

eye coordination and self-motivation appear to be occurring with the expected frequency. Lastly, a majority of sites within the school were found to contain evidence of exposure to the relationship between man and nature. Student achievement data reveal that kindergarten students scored at the national norm on language ITBS subtests and slightly below the national norm in mathematics. Minority students scored below district and national norms. Non-minority students scored above national norms in both language and math. Given the findings of this first year evaluation, the following recommendations are offered:

1. Continue efforts to staff remaining elementary resource staff positions and first grade teacher positions with fully qualified Montessori educators. While school leadership in cooperation with Faxon Montessori leadership has identified and recommended individuals for all but one resource position, it would be advantageous to continue identifying potential candidates for future openings.

2. Leadership should continue to closely monitor the progress of teachers-in-training to assure continued success and qualified, certified Montessori teachers. While the program has had a successful first year of implementation, the program will not achieve it's potential impact without fully qualified, certified Montessori teachers. Leadership may wish to consider what actions should be taken should a teacher fail to become certified at the conclusion of training.

3. The purchasing/procurement officials may wish to establish guidelines for Montessori materials funding that reflect the unique needs of Montessori classrooms. According to school leadership, the district allocates textbook funds annually for each school, however Montessori does not make extensive use of textbooks. Instead Montessori materials are required to implement the theme. Apparently, the transference of textbook funds to Montessori materials is problematic. Not a single Holliday teacher believed they had the necessary Montessori materials, as late as April of the current year, to successfully implement the theme. Leadership reported that critical Montessori materials did not arrive until November.

4. Leadership should continue to monitor classroom activities to assure that the full range of Montessori-based learning is occurring. While observational evidence indicates a substantial integration of independent learning, it would be expected to see declines in this type of activity as teachers become more proficient with instruction in the Montessori classroom. It would be relatively easy for inexperienced teachers to rely upon one mode of instruction and learning, especially one in which the teacher assumes a reactive, instead of proactive, stance. This recommendation is not designed to be critical of teacher efforts but instead to encourage and remind program staff to guard against rigidity in instructional method.

References

Denver Public Schools. (1988). *Montessori Education*. Denver Public Schools.

Hale, P.D. & Levine, D.U. (1986). *Long-Range Magnet School Plan*. Kansas City, MO: Kansas City, Missouri School District.

Holliday Montessori Task Force. (1990). *Holliday Montessori Magnet School Site Plan*. Kansas City, MO: Kansas City, Missouri School District.

Research Office. (1990). *September 26, 1990, Student Membership*. Kansas City, MO: Kansa City, Missouri School District.

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APPENDIX A

Holliday Montessori

Extended Day Program

Holliday Montessori

EXTENDED DAY ACTIVITY DEFINITIONS

1. Organized Games
   Group games to develop social interaction and student involvement.

2. Videos
   Group activities to view and discuss videos and filmstrips on various subjects related to nature, culture, and art.

3. Group Stories
   Activities to develop oral and written language, listening, and communication skills.

4. Developmental Learning Activities
   Individualized and large group movement and perceptual developmental activities to develop small and large motor coordination.

5. Puzzles and Games
   Individual activities using manipulatives to develop concentration and independence.

6. Music and Movement
   Activities to enhance understanding and appreciation of music and movement.

7. Cultural Subjects
   Programs for map and globe work, science, and cultural awareness.

8. Tutoring
   Reinforcement of the Montessori Method in the areas of math and reading using appropriate instructional techniques to correct deficits in learning.

9. Art
   Activities with different media to develop creativity and communication.

10. Management
    Staffing, instructional services, postage, repair and maintenance, snacks, small equipment for management.